

AMENDMENTS TO THE CLAIMS

Sub A 1. (currently amended) ~~A link mechanism for establishing the position of a second spherical bearing of the mechanism relative to a first spherical bearing of the mechanism, and for establishing the direction, relative to a rod of the mechanism, of an arm segment extending from said second bearing, the link mechanism to determine a position and direction of an axial rod,~~  
comprising:

said an axial rod; and

two spherical bearings to support said axial rod, said first and said second spherical bearings attached to said rod, said two spherical bearings being capable of changing positions relative to each other along said rod,

wherein a motion of one of said two spherical bearings relative to said axial rod along an axis of said axial rod is constrained, and the other of said spherical bearings can travel along said rod.

2. (currently amended) ~~A link mechanism according to claim 1, wherein the position of the second bearing and the direction of said arm segment are defined by~~ Method to determine a position and a direction of an axial rod of a link mechanism wherein, said link mechanism comprises:

an axial rod; and

two spherical bearings to support said axial rod, said two spherical bearings being capable of changing positions, wherein the method comprises steps of:

constraining a motion of one of said two spherical bearings relative to said axial rod along the axis of said axial rod;

allowing the other of said spherical bearings to travel along said axial rod; and

determining the position and direction of said axial rod by defining a coordinate values of one of said two spherical bearings and the a position of the other of said two spherical bearings relative to the one of said two spherical bearings.

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(unit)

3. (currently amended) A link mechanism method to determine a position and a direction of an axial rod according to claim 1  
2, wherein the link mechanism is a part for an output of a robot arm.

4. (currently amended) A link mechanism for establishing the position of a second support of the mechanism relative to a first support of the mechanism, and for establishing the direction, relative to a rod of the mechanism, of an arm segment extending from said second support, the link mechanism to determine a position and a direction of an axial rod, comprising:

said an axial rod; and

~~two supports to support said axial rod,  
said first and said second supports attached to said rod, said  
two supports being capable of changing positions relative to each  
other along said rod,~~

~~wherein a motion of one of said two  
supports relative to said axial rod along an axis of the said  
axial rod is constrained, and the other of said supports can  
travel along said axial rod.~~

5 (cont)  
5. (currently amended) ~~A link mechanism according to claim  
4, wherein the position of the second support and the direction  
of said arm segment are defined by Method to determine a position  
and a direction of an axial rod of a link mechanism wherein, said  
link mechanism comprises:~~

~~an axial rod; and~~

~~two supports to support said axial rod, said two supports  
being capable of changing positions.~~

~~wherein the method comprises steps of:~~

~~constraining a motion of one of said two supports relative  
to said axial rod along the axis of said axial rod;~~

~~allowing the other of said supports to travel along said  
axial rod; and~~

determining the position and direction of said axial rod by defining a coordinate values of one of said two supports and the a position of the other of said two supports relative to the one of said two supports.

6. (currently amended) A link mechanism method to determine a position a direction of an axial rod according to claim 4 5, wherein the link mechanism is a part for an output of a robot arm.

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(unit)  
7. (previously added) Method for establishing the position of a second spherical bearing of a link mechanism relative to a first spherical bearing of the mechanism, and for establishing the direction, relative to a rod of the mechanism, of an arm segment extending from said second bearing, the method comprising:

attaching said spherical bearings to said rod, and enabling said two spherical bearings to change positions relative to each other along said rod;

wherein motion of one of said two spherical bearings relative to said rod along an axis of the rod is constrained, and the other of said spherical bearings can travel along said rod; and the method further comprises a step of

defining coordinate values of one of said two spherical bearings and the position of the other of said

two spherical bearings relative to the one of said two spherical bearings.

8. (previously added) Method according to claim 7, wherein the link mechanism serves as an output of a robot.

9. (previously added) Method for establishing the position of a second support of a link mechanism relative to a first support of the mechanism, and for establishing the direction, relative to a rod of the mechanism, of an arm segment extending from said second support, the method comprising:

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(undl)  
attaching said supports to said rod, and enabling said two supports to change positions relative to each other along said rod;

wherein motion of one of said two supports relative to said rod along an axis of the rod is constrained, and the other of said supports can travel along said rod; and the method further comprises a step of

defining coordinate values of one of said two supports and the position of the other of said two supports relative to the one of said two supports.

10. (previously added) Method according to claim 9, wherein the link mechanism serves as an output of a robot.